

The logo for the Energy Center of Wisconsin is located in the upper left quadrant of the slide. It features a red circle with several concentric white circles around it. Four white arrows point outwards from the top of the red circle. The text "ENERGY CENTER OF WISCONSIN" is written in white, uppercase letters across the middle of the logo.

ENERGY CENTER OF WISCONSIN

Energy Efficiency Potential in Wisconsin

**Presentation to the Governor's Task Force on Energy
Efficiency and Renewables**

Contact: Susan Stratton, Executive Director

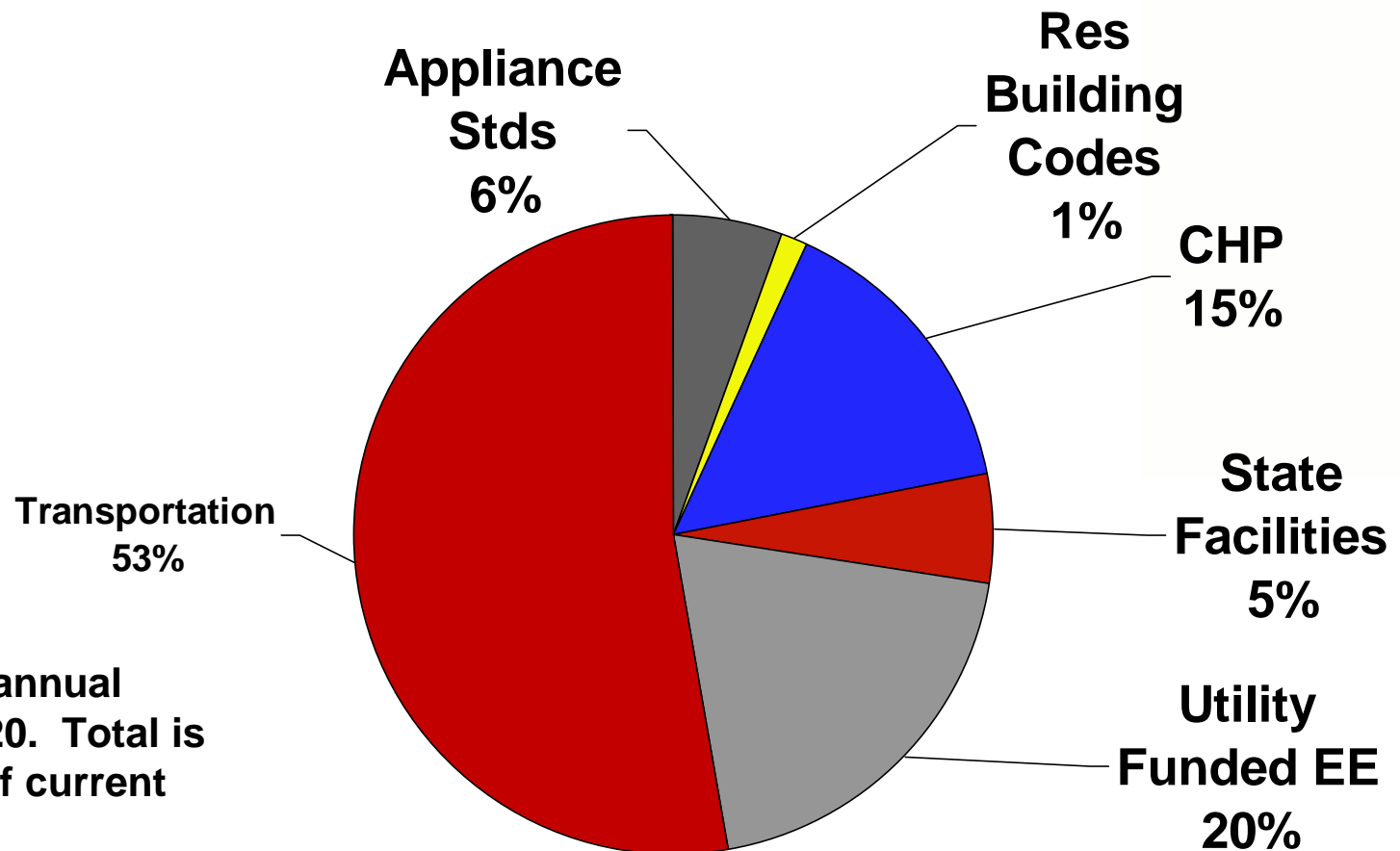
April 27, 2004

YOUR PARTNERS IN ENERGY RESEARCH, EDUCATION & CONSULTING

Questions

- What do we mean by energy efficiency potential?
- What's been done in Wisconsin in the past 10 years?
- What's been done in the US in the past 3 years?
- What are our options for updating the Wisconsin estimate of energy efficiency potential?

What do we mean by energy efficiency potential?



Estimates are annual savings by 2020. Total is equal to 20% of current energy use.

Source: ACEEE Report E031

www.ecw.org

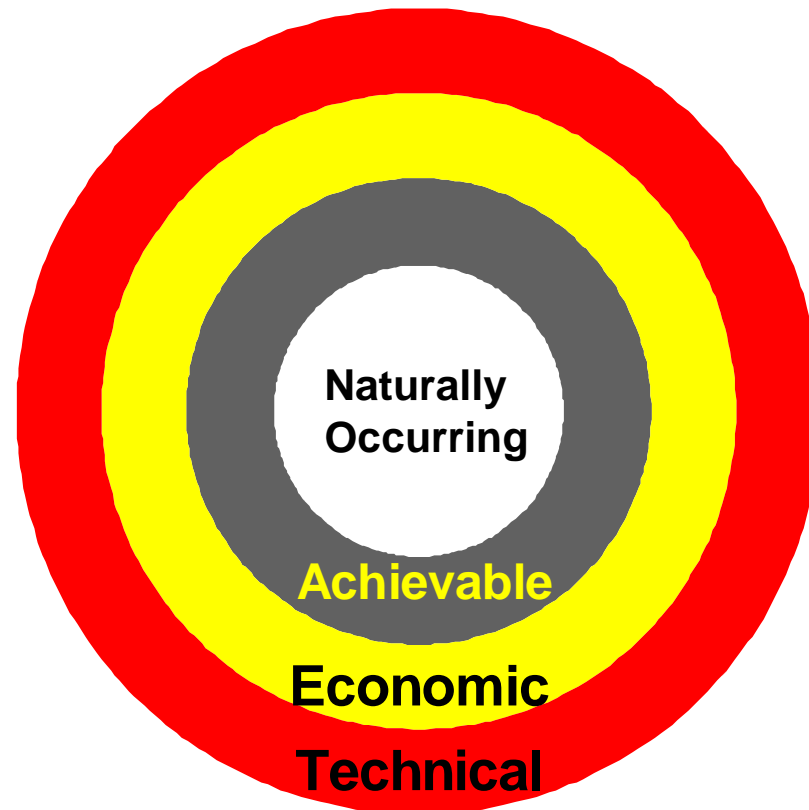
What do we mean by energy efficiency potential?

- **Technical:** Amount of efficiency theoretically available without regard for cost.
- **Economic:** Amount of technical potential available at costs below avoided electric supply
- **Achievable:** Market acceptance of economic efficiency technologies with intervention
- **Naturally occurring:** Market acceptance of economic efficiency technologies without intervention

Focus on
Energy

What do we mean by energy efficiency potential?

Common Energy Efficiency Definitions



What's been done in Wisconsin?

ECW STEP 1994	FOE C&I Baseline 2001	WPS 2003 (Weston 4)	We Energies 2002 (PTF)	Alliant Energy (Sheboygan Falls)
.4%-13.5% Energy .2%-11.5% Peak	4%-19% Energy	2% Peak by 2014 4.7% Energy by 2014	Residential Only (after public benefits) 10MW Peak	

Note: ECW has conducted other partial market studies and assessments between 1994-2004

What's been done in the US?

Region/State	Energy	Peak	Horizon
National	12%	23%	15 yr
California	5%	5%	5 yr
Iowa	11%	12%	10 yr
Minnesota	10%	8%	10 yr
Washington		11%	20 yr
Hawaii	9%	8%	20 yr
British Columbia	7%	8%	10 yr
Illinois (Res.)	.5%		?

Options for Updating Wisconsin EE Estimate

- \$ ■ Literature and Data Survey of comparables**
- \$\$\$ ■ End use—bottom up model (retrofit only)**
- \$\$\$ ■ End use—bottom up model (add new, replacement, and remodel markets)**
- \$\$ ■ Top Down with market scenario analysis**
- \$\$\$\$ ■ Integrated Resource Planning Process**

Options for Updating Wisconsin EE Estimate

- **Factors to consider before selecting method**
 - **Time available for study**
 - **Availability of recent baseline information**
 - **Budget/Funding source**
 - **Goals of study**
 - Justify overall spending
 - Inform program design
 - Input to IRP process

Options for Updating Wisconsin EE Estimate

- **ECW has collected recent information not included in Wisconsin studies:**
 - **Industrial Motor evaluation**
 - **Residential Characterization study**
 - **Appliance sales tracking study**
 - **Furnace and AC sales tracking**
 - **Industrial and Commercial Supply Chain Study**
 - **Training needs assessment for High Performance Commercial Buildings**

ECW Recommendation

- **Conduct a statewide study in two phases:**
 - **1. Review data and literature from recent studies and create a comparable estimate based on our knowledge of WI markets. (July-Aug; \$15-25K) and**
 - **2. Create in depth study using Top Down market approach. (Dec-Feb; \$150-200K)**
 - **OR 2. Create in depth bottom up end-use study expanding on recent utility studies (Dec-Mar; \$200-300K)**

Note: Cost and completion date estimates are preliminary and depend on scope and availability of data.

Qualifications of ECW

- Independent non-profit
- Created in 1989 to perform “public benefits” research and demonstration on energy efficiency and conservation
- Mission is to create information on energy issues to disseminate to policymakers and the public
- Staff expertise in engineering, evaluation, statistics, program design
- Has conducted recent studies on energy efficiency markets in Wisconsin